

Remarks

It is noted that the Examiner has cited a new reference Senevirathne under 35 USC 102(c) in respect of claims 1-5, 11 and 14-16, and 21-22. This rejection is respectfully traversed as Senevirathne fails to disclose each of the claim limitations.

In the prior art acknowledged by the application (see Figure 2 of the application), the health (operational performance) of the currently active source is evaluated by processing block 208. The currently active source could be the source 202 or the source 204. When the health falls below a predetermined threshold, protection switching to the other source occurs without taking into account the fact that the health (operational performance) of the other source may actually be worse than the current primary source.

In accordance with an embodiment of the invention, the health of both sources is monitored, and protection switching occurs when an assessment of both sources shows that one is performing better than the other, so as to pass the active data through the connection that is most health (least errors).

The independent claims have been amended to better reflect this aspect of the invention (see, for example, page 12, line 4).

A detailed analysis of Senevirathne shows that he does not teach this novel feature. Senevirathne switches from the active to the protection source based only on the condition of the active source and without regard to the condition of the protection source. This has the disadvantage that switching may occur even though the error rate in the protection circuit is worse than that in the active circuit. Of course, the protection circuit would become the active circuit, in which case Senevirathne would switch back again to the previous active circuit if the error conditions in the new active circuit met the required criteria. This method disclosed in Senevirathne could result in the system continually switching back and forth between the active and protection circuits if errors were appearing on both circuits.

In particular, the Examiner is referred to the passage commencing at line 41, col. 7, and lines 21 - 57, col. 9, referring to Figure 5, from which she will see that that switching occurs when defined error conditions occur on the active lines regardless of the state of the protection sources. When deciding whether to make a protection switch, in contrast to the present invention, clearly no account is taken of the health of the protection circuit. In this respect, Senevirathne resembles the prior art acknowledged with reference to Figure 2. Further

confirmation is provided by col. 6, lines 9 – 10, which state that protection switching is initiated if the total number of communication errors for a given communication link exceeds a specified number. It is apparent that in making the switching decision no account is taken of the state of health of the protection path.

This methodology is also apparent from the passages at lines 32, col. 7, 48, col. 7, and 37, col. 9. Each FAD is connected to 8 Tap Muxes by two lines, two for the primary path and two for the protection path and, by two lines two the FAD controller, making a total of 18 for each FAD. The four therefore have a total of $4 \times 18 = 72$ lines, (36 for the active circuit and 36 for the protection circuit) – see col. 9, line 30, which are monitored. However, a decision is only based on the status of 36 lines (see col. 7, line 47) because the decision to switch is based on the error status of the currently active circuit without regard to the status of the protection circuit in the same way as described with reference to Figure 2 of the application.

In order to meet the test of anticipation, it is essential that

"each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

The Federal Circuit has also stated:

"An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized persons of ordinary skill in the field of the invention". *ATD Corp. v. Lydall, Inc.*, 48 USPQ 2d 1321.

Senevirathne clearly fails to show the limitation of switching when the performance of the protection circuit is better than that of the currently active circuit, and therefore cannot be an anticipation under 35 USC 102(e). Senevirathne only uses one criterion to determine when to switch circuits, namely the performance of the currently active circuit.

This argument applies to independent claims 1, 11, and 21. In addition, with regard to claim 21, the Examiner states that "all the limitations of this claim have been noted in the rejection of claim 1". However, prior to this amendment, claim 1 only stated that the switching occurred based on the operational performance of the protection and redundant paths; it did not contain the limitation that switching occurred when the performance of the active path was worse than the performance of the redundant path as specified in claim 21. It is not

understood how the Examiner can have ignored this limitation because in the Advisory Action, the reason she gave for indication that further consideration and search would be required was that the applicant made the minor obvious correction in that as previously presented, the applicant had incorrectly indicated that switching would occur when the performance of the active source became better than that of the redundant source. Obviously, switching occurs when the performance of the redundant source becomes better (or the currently active source becomes worse than the redundant source, which amounts to the same thing). As noted above, this limitation is clearly lacking in Senevirathne.

Claim 21 is based on the embodiment disclosed in Figure 1B, which discloses chains 140 of data processing elements with cross-over connections between them. Senevirathne clearly fails to disclose such an arrangement. The Examiner generically alleges that this limitation is disclosed in lines 1-40 of Senevirathne without identifying which parts of Senevirathne meet the claim limitations. This passage describes the embodiment shown in Figure 1 of Senevirathne, which merely shows a Fabric controller 104 connected to a plurality of FADs 108, each of which is connected to each FAD. *Prima facie*, Figure 1 of Senevirathne looks nothing like the claimed arrangement. It does not show chains of successive data processing elements with the cross connects as more particularly defined in claim 21. In fact, contrary to the chains of successive elements with cross connects as claimed, Senevirathne at line 51, col. 5 states that typically switching is provided for the "entire fabric even if the error is found to occur in only one communications line of the primary switching fabric". If the Examiner persists in her rejection of claim 21, she is respectfully requested to more fully identify what particular features of Senevirathne correspond to the respective claim limitations.

"The examiner cannot sit mum, leaving the applicant to shoot arrows into the dark hoping to somehow hit a secret objection harbored by the examiner. The 'prima facie case' notion, the exact origin of which appears obscure (*see In re Piasecki*, 745 F.2d 1468, 1472, 233 USPQ 785, 788 (Fed. Cir. 1984)), seemingly was intended to leave no doubt among examiners that they must state clearly and specifically any objections (the prima facie case) to patentability, and give the applicant fair opportunity to meet those objections with evidence and argument. *In re Oetiker* (CA FC) 24 USPQ2d 1443.

What does the Examiner consider the corresponding data processing elements producing the same data subject to errors? Each tap, for example, has a primary path and a protection path, but there is no teaching in Senevirathne of the primary path of one tap being connected to the protection path of a downstream processing element or vice versa.

In addition, as noted with respect to claim 1, Senevirathne clearly does not disclose an assessment module which determines which of the primary path and protection path has better operational performance.

It is believed that the application is in condition for allowance. Allowance and reconsideration are therefore earnestly solicited.

Respectfully submitted,



Registration No. 34519
Richard J. Mitchell
Agent of Record

MARKS & CLERK
P. O. Box 957, Station B,
Ottawa, Ontario, Canada
K1P 5S7
(613) 236-9561